

IN THE CLAIMS:

Please amend the claims as follows:

Claims 1 to 13. (Canceled)

14. (New) A method for the inhibition of viral proliferation which comprises treating a patient with a composition containing an antiviral effective amount of a serine protease inhibitor comprising the amino acid sequence of a naturally-occurring secretory leukocyte protease inhibitor or a substitution analog comprising the amino acid sequence (SEQ ID NO:4):

R1-Gly-Lys-Ser-Phe-Lys-Ala-Gly-Val-Cys-Pro-Pro-
Lys-Lys-Ser-Ala-Gln-Cys-Leu-R2-Tyr-Lys-Lys-Pro-
Glu-Cys-Gln-Ser-Asp-Trp-Gln-Cys-Pro-Gly-Lys-Lys-
Arg-Cys-Cys-Pro-Asp-Thr-Cys-Gly-Ile-Lys-Cys-Leu-
Asp-Pro-Val-Asp-Thr-Pro-Asn-Pro-Thr-Arg-Arg-Lys-
Pro-Gly-Lys-Cys-Pro-Val-Thr-Tyr-Gly-Gln-Cys-R8-
R3-R9-Asn-Pro-Pro-Asn-Phe-Cys-Glu-R4-Asp-Gly-
Gln-Cys-Lys-Arg-Asp-Leu-Lys-Cys-Cys-R5-Gly-R6
Cys-Gly-Lys-Ser-Cys-Val-Ser-Pro-Val-Lys-R7

wherein

R1 and R7 are the same or different and are selected from the group consisting of serine, alanine or a substituted or unsubstituted amino acid residue;

R2, R3, R4, R5 and R6 are the same or different and are selected from the group consisting of methionine, valine, alanine, phenylalanine, tyrosine, tryptophan, lysine, glycine and arginine; and

R8 and R9 are the same or different and are selected from the group consisting of methionine, valine, alanine, phenylalanine, tyrosine, tryptophan, lysine, glycine, leucine and arginine.

15. (New) The method of claim 14, wherein said secretory leukocyte protease inhibitor is administered intravenously.

16. (New) The method of claim 14, wherein said secretory leukocyte protease inhibitor is administered subcutaneously.

17. (New) The method according to claim 14, wherein said substitution analog has phenylalanine at position R8.

18. (New) The method according to claim 14, wherein said substitution analog has glycine at position R2.

19. (New) The method according to claim 14, wherein said substitution analog has glycine at position R8.

20. (New) The method according to claim 14, wherein said substitution analog has valine at position R8.

21. (New) The method according to claim 14, further comprising administering at least one additional antiviral or antibacterial agent.

22. (New) The method according to claim 14, wherein said secretory leukocyte protease inhibitor is covalently linked to polyethylene glycol.

23. (New) The method of claim 14, wherein each of R1 and R7 is a substituted or unsubstituted amino acid residue and R1 and R7 are the same or different.

24. (New) A method for the inhibition of retroviral proliferation which comprises treating a patient with a composition containing an antiretroviral effective amount of a serine protease inhibitor comprising the amino acid sequence of a naturally-occurring secretory leukocyte protease inhibitor or a substitution analog comprising the amino acid sequence (SEQ ID NO:4):

R1-Gly-Lys-Ser-Phe-Lys-Ala-Gly-Val-Cys-Pro-Pro-
Lys-Lys-Ser-Ala-Gln-Cys-Leu-R2-Tyr-Lys-Lys-Pro-
Glu-Cys-Gln-Ser-Asp-Trp-Gln-Cys-Pro-Gly-Lys-Lys-
Arg-Cys-Cys-Pro-Asp-Thr-Cys-Gly-Ile-Lys-Cys-Leu-
Asp-Pro-Val-Asp-Thr-Pro-Asn-Pro-Thr-Arg-Arg-Lys-
Pro-Gly-Lys-Cys-Pro-Val-Thr-Tyr-Gly-Gln-Cys-R8-
R3-R9-Asn-Pro-Pro-Asn-Phe-Cys-Glu-R4-Asp-Gly-
Gln-Cys-Lys-Arg-Asp-Leu-Lys-Cys-Cys-R5-Gly-R6
Cys-Gly-Lys-Ser-Cys-Val-Ser-Pro-Val-Lys-R7

wherein

R1 and R7 are the same or different and are selected from the group consisting of serine, alanine or a substituted or unsubstituted amino acid residue;

R2, R3, R4, R5 and R6 are the same or different and are selected from the group consisting of methionine, valine, alanine, phenylalanine, tyrosine, tryptophan, lysine, glycine and arginine; and

R8 and R9 are the same or different and are selected from the group consisting of methionine, valine, alanine, phenylalanine, tyrosine, tryptophan, lysine, glycine, leucine and arginine.

25. (New) The method according to claim 24, wherein the retrovirus is a human immunodeficiency virus (HIV).

26. (New) The method according to claim 25, wherein the HIV is HIV-1.

27. (New) The method of claim 24, wherein said secretory leukocyte protease inhibitor is administered intravenously.

28. (New) The method of claim 24, wherein said secretory leukocyte protease inhibitor is administered subcutaneously.

29. (New) The method according to claim 24, wherein said substitution analog has phenylalanine at position R8.

30. (New) The method according to claim 24, wherein said substitution analog has glycine at position R2.

31. (New) The method according to claim 24, wherein said substitution analog has glycine at position R8.

32. (New) The method according to claim 24, wherein said substitution analog has valine at position R8.

33. (New) The method according to claim 24, further comprising administering at least one additional antiviral or antibacterial agent.

34. (New) The method according to claim 24, wherein said secretory leukocyte protease inhibitor is covalently linked to polyethylene glycol.

35. (New) The method of claim 24, wherein each of R1 and R7 is a substituted or unsubstituted amino acid residue and R1 and R7 are the same or different.